

63  
Figure 7. Operating Principle of a Sealed Ni-MH Cell

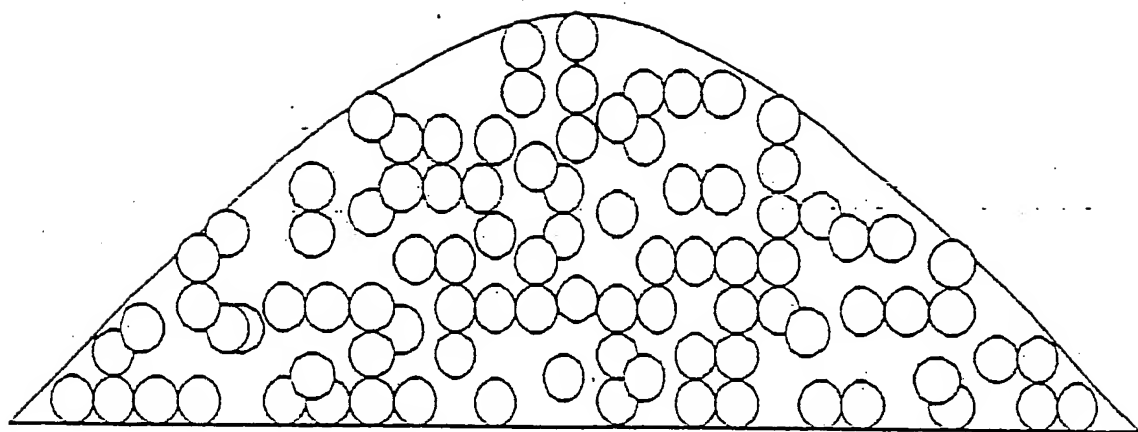
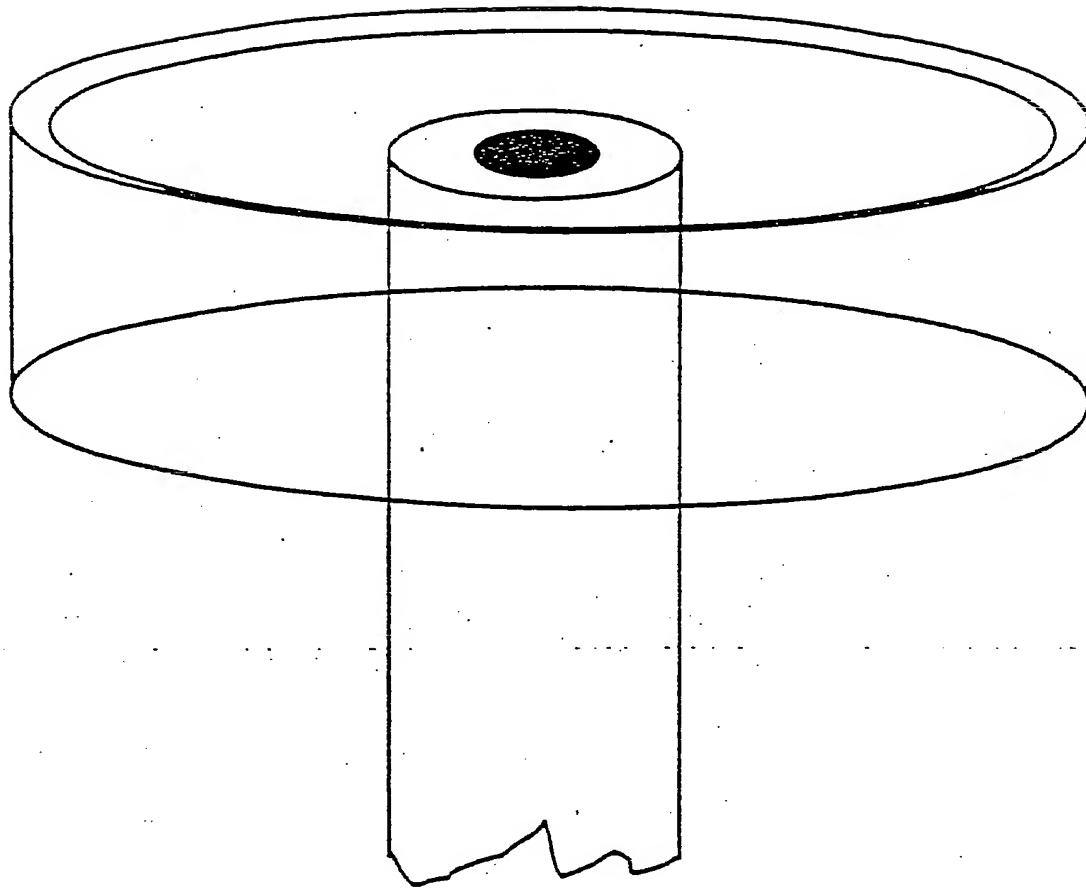
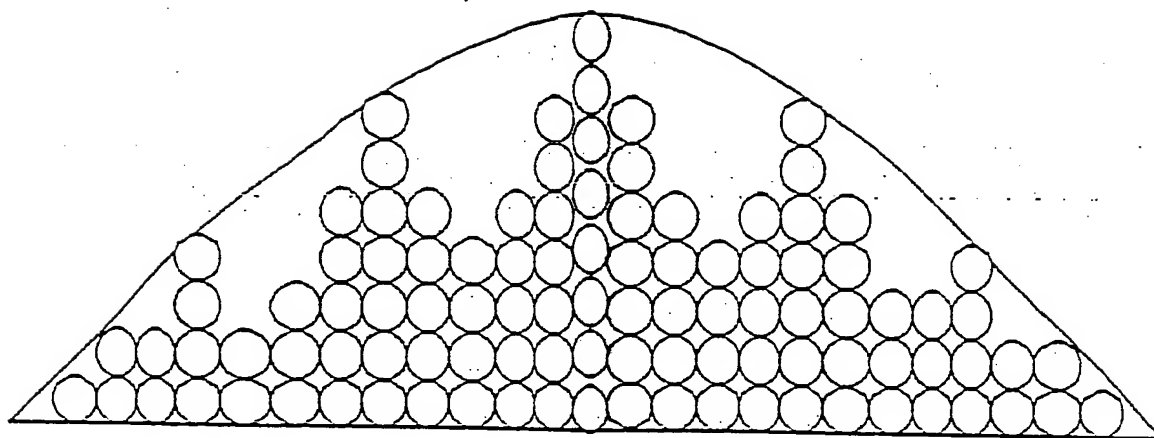


Figure <sup>4</sup>~~3~~. Film Configuration for Non-magnetized Electrode.



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Figure 7. Electrode Configuration for Drying Magnetized Electrode in Normal Direction.



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~~5~~  
Figure 6. Film Configuration for Magnetized Electrode.

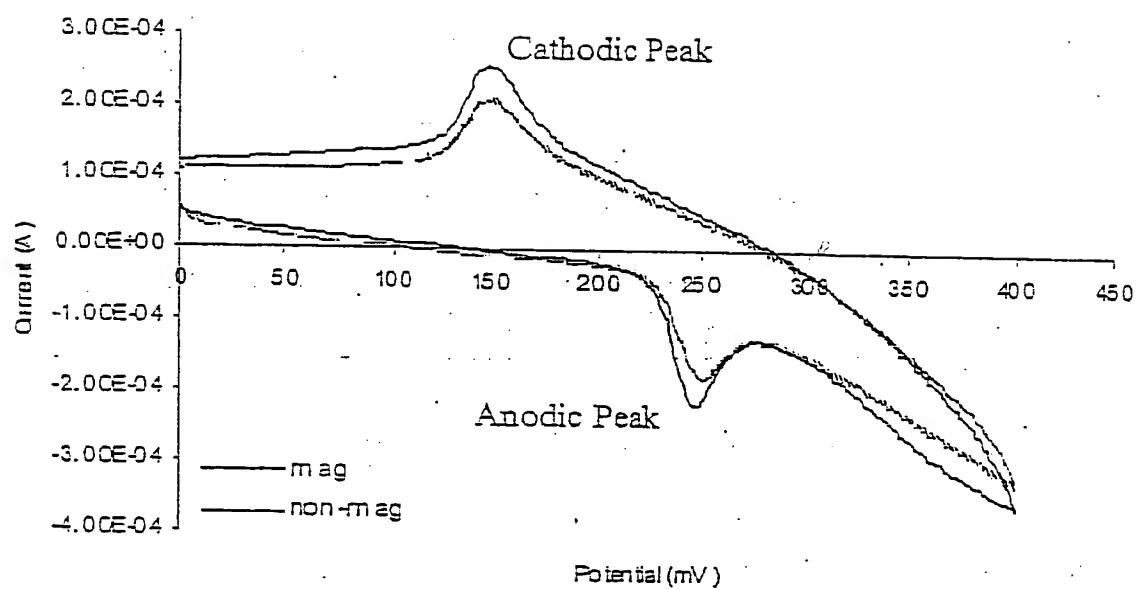


Figure 7. Cyclic Voltammograms of Magnetized and Non-magnetized Pure Nickel Hydroxide Electrode

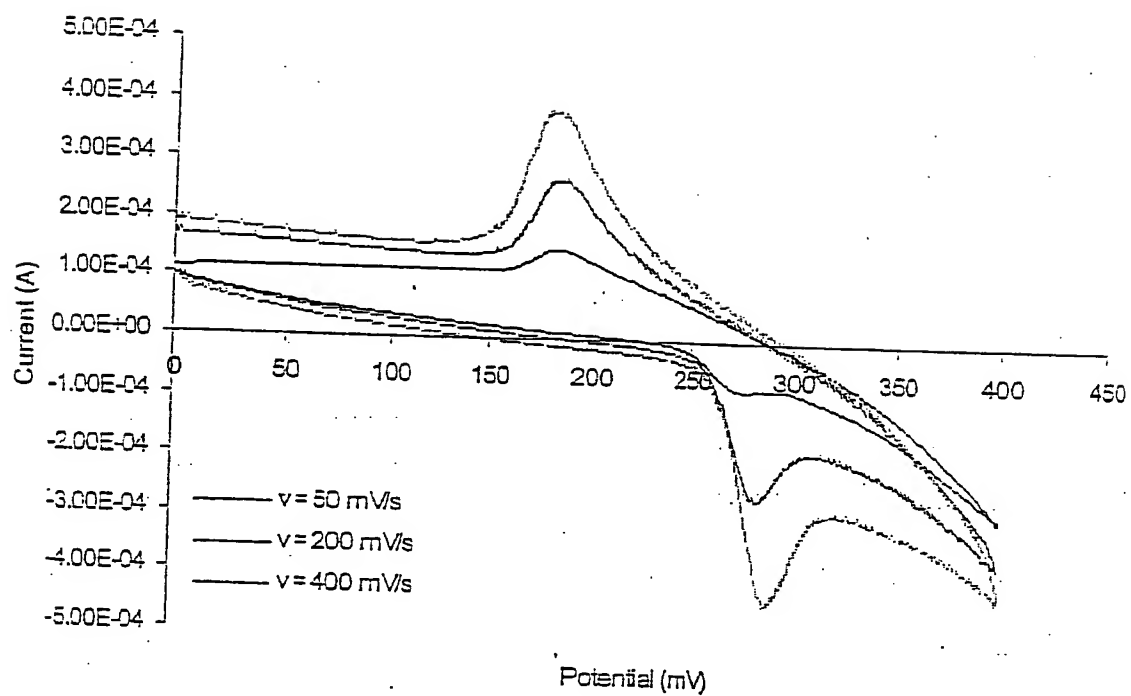


Figure 8. Cyclic Voltammograms for Magnetized Pure Nickel Hydroxide Electrode at Different Scan Rates

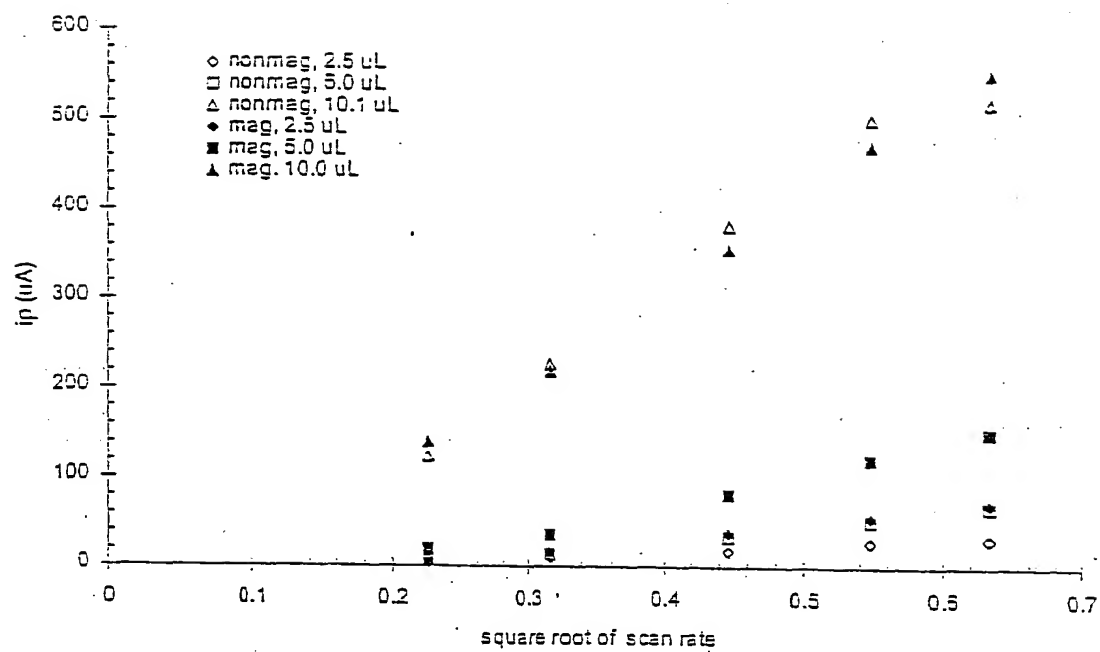


Figure 9. Relationship Between Cathodic Peak Current and the Square Root of Scan Rate for Magnetized and Non-magnetized Pure Nickel Hydroxide Electrode.



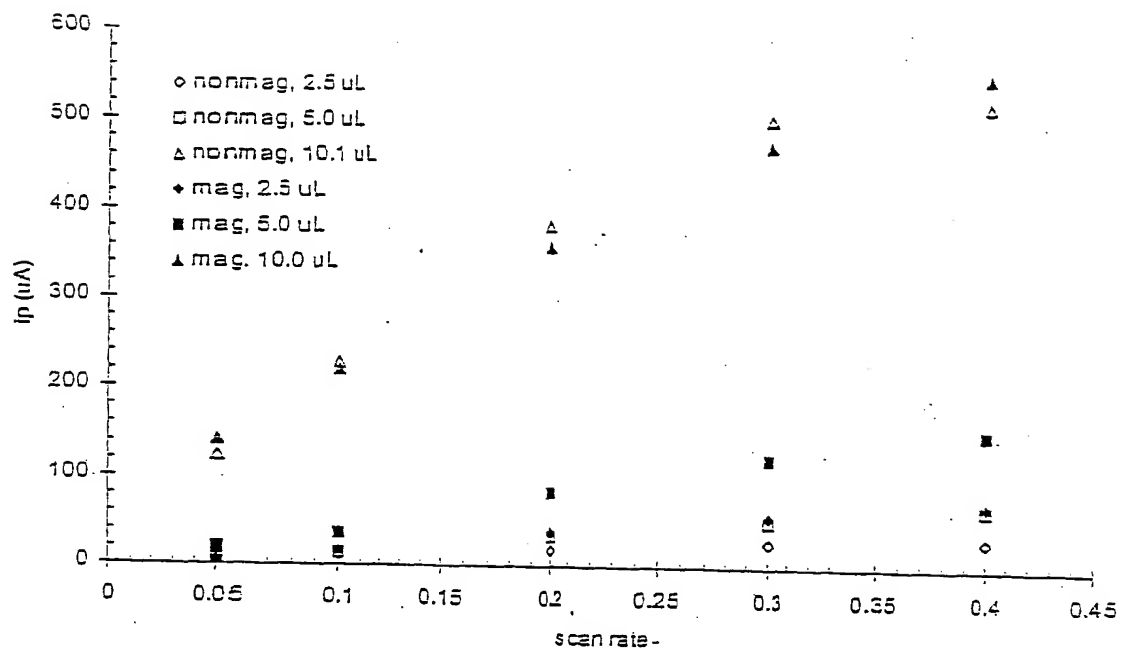


Figure 10. Relationship Between Cathodic Peak Current and Scan Rate for Magnetized and Non-magnetized Pure Nickel Hydroxide Electrode.

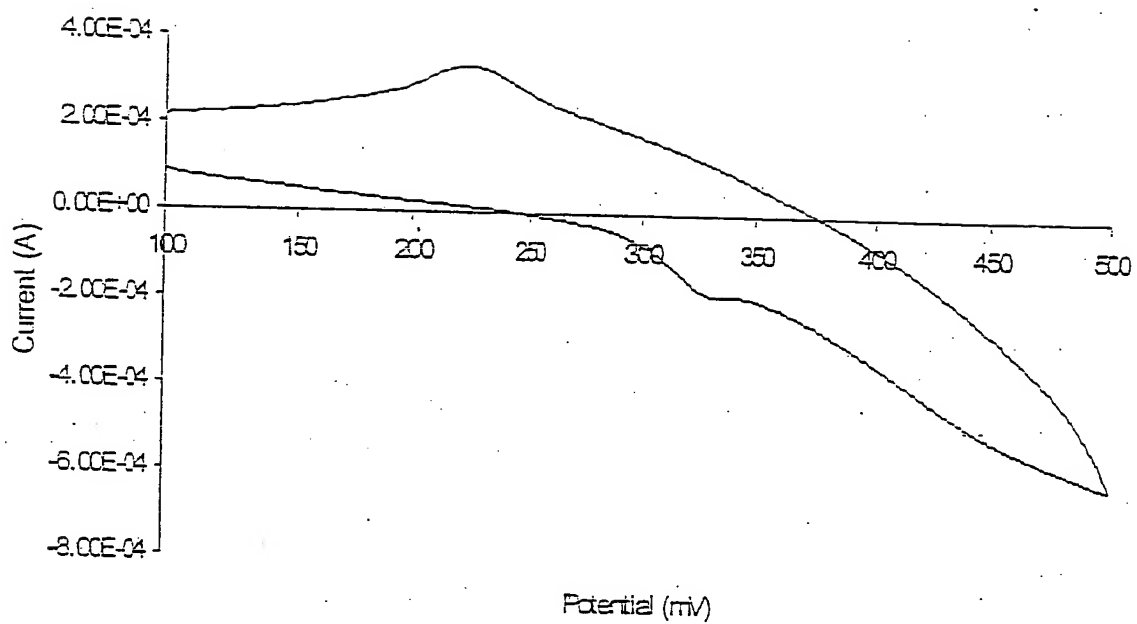
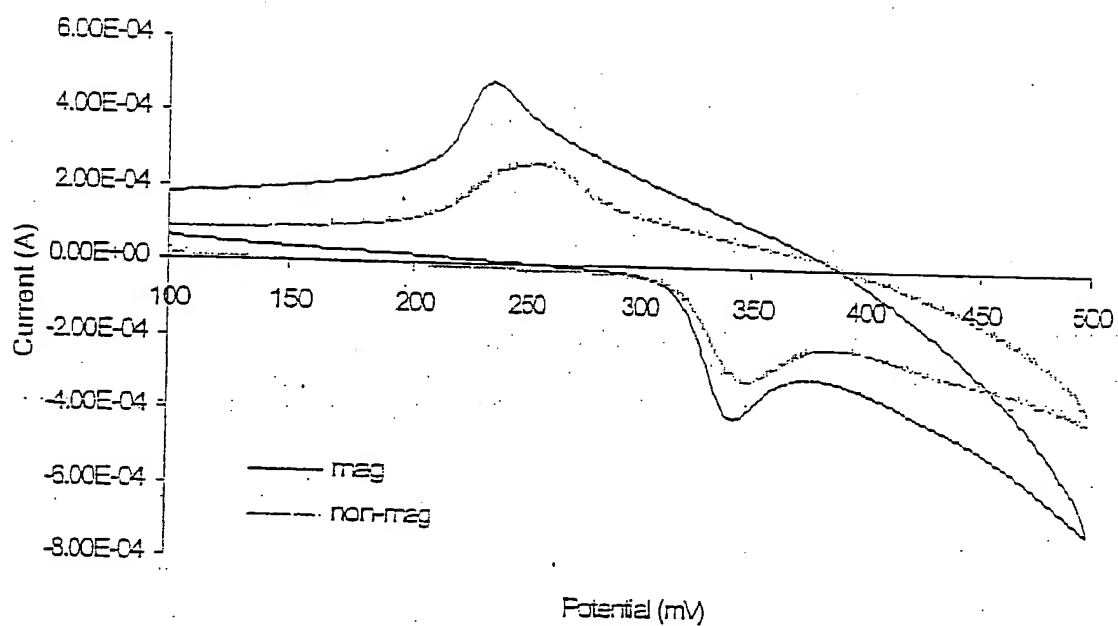
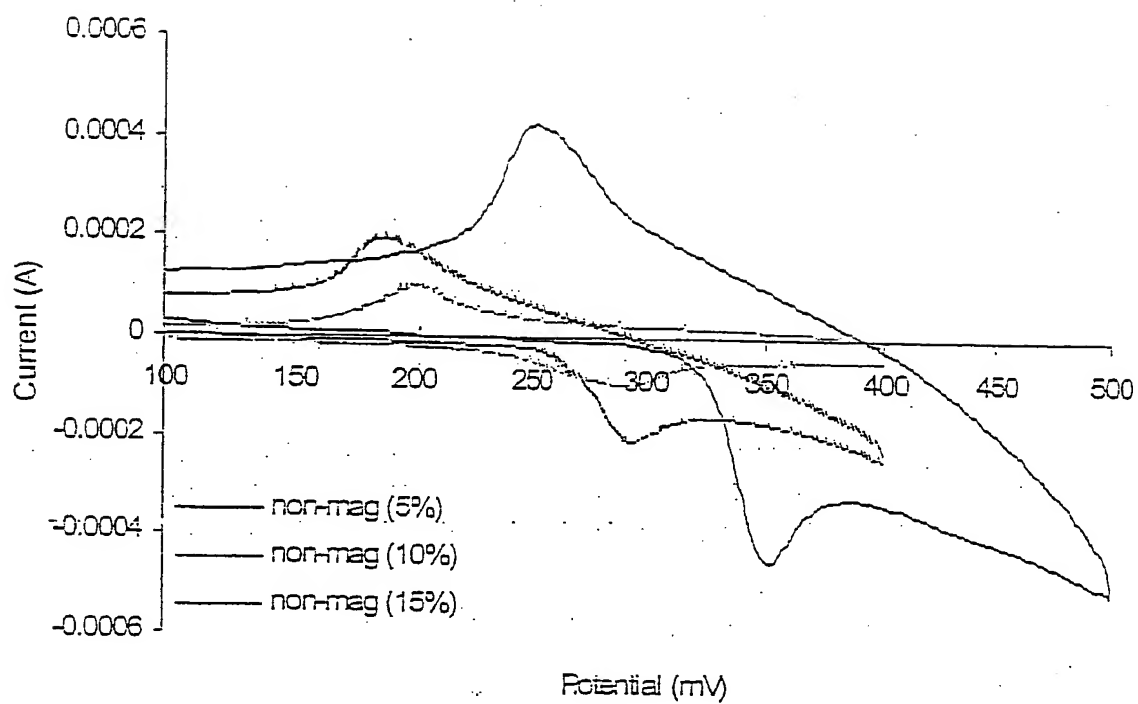


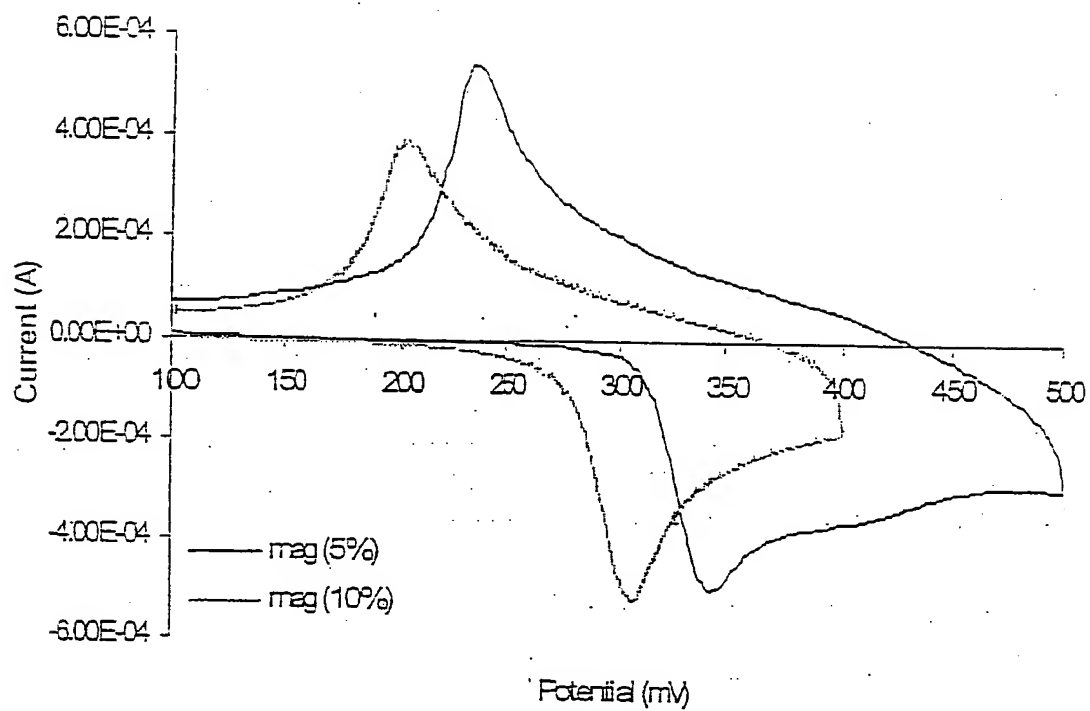
Figure 11. Cyclic Voltammogram for Non-magnetized  $\text{Ni}(\text{OH})_2 + \text{Glass Beads (5\%)}$  Mixture Electrode ( $v = 200 \text{ mV/sec}$ ).



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 Figure 12. Cyclic Voltammograms for Magnetized and Non-magnetized  $\text{Ni}(\text{OH})_2 + \text{Co}(15\%)$  Mixture Electrode ( $\nu = 200 \text{ mV/sec}$ ).



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 Figure 13. Cyclic Voltammograms for Non-magnetized  $\text{Ni}(\text{OH})_2$  with 5% and 10% and 15%  $\text{Fe}_3\text{O}_4$  Mixture Electrode ( $v = 200 \text{ mV/sec}$ ).



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 Figure 14. Cyclic Voltammograms for Magnetized  $\text{Ni}(\text{OH})_2$  with 5% and 10%  $\text{Fe}_3\text{O}_4$  Mixture Electrode ( $\nu = 200 \text{ mV/sec}$ ).

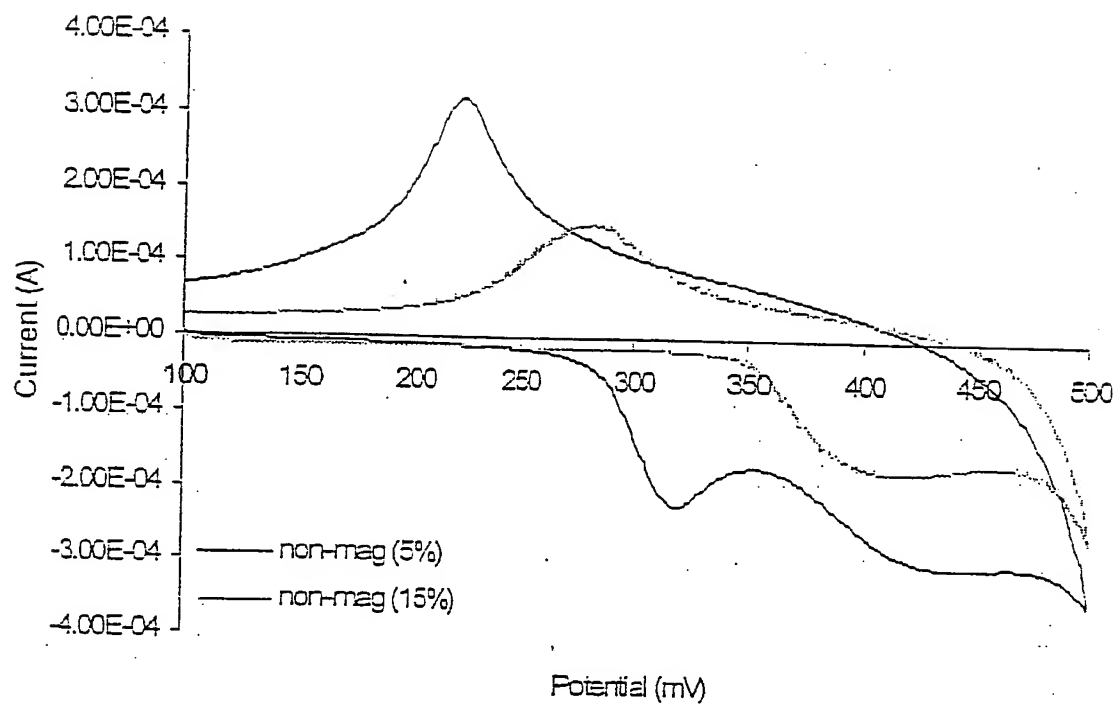


Figure 15. Cyclic Voltammograms for Non-magnetized  $\text{Ni}(\text{OH})_2$  with 5% and 15% NdFeB Mixture Electrode ( $v = 200 \text{ mV/sec}$ ).

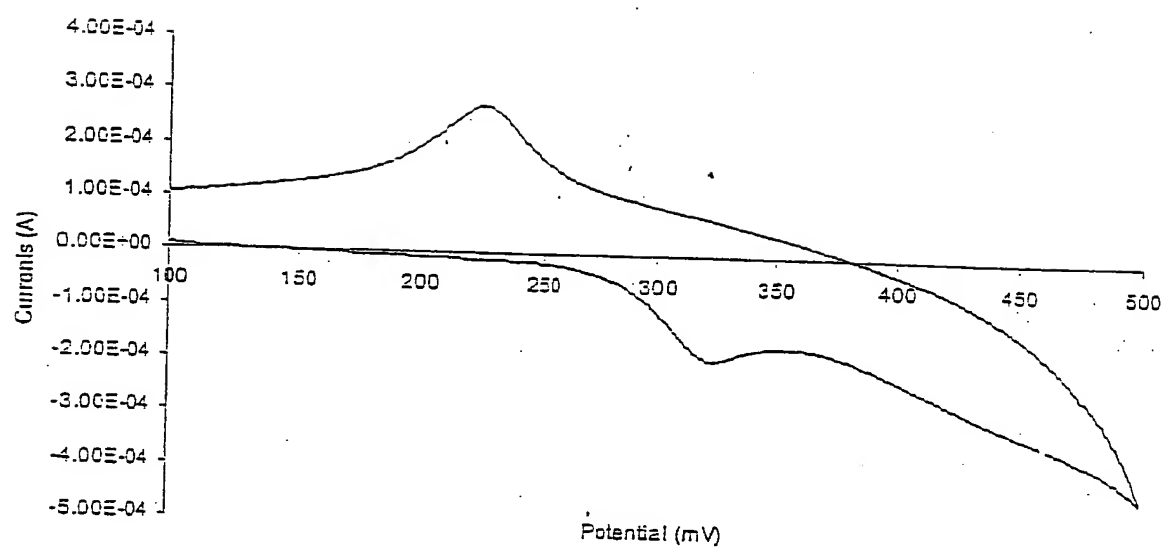


Figure 16. Cyclic Voltammograms for Magnetized  $\text{Ni}(\text{OH})_2 + \text{NdFeB}$  Mixture Electrode ( $\nu = 200 \text{ mV/sec}$ ).

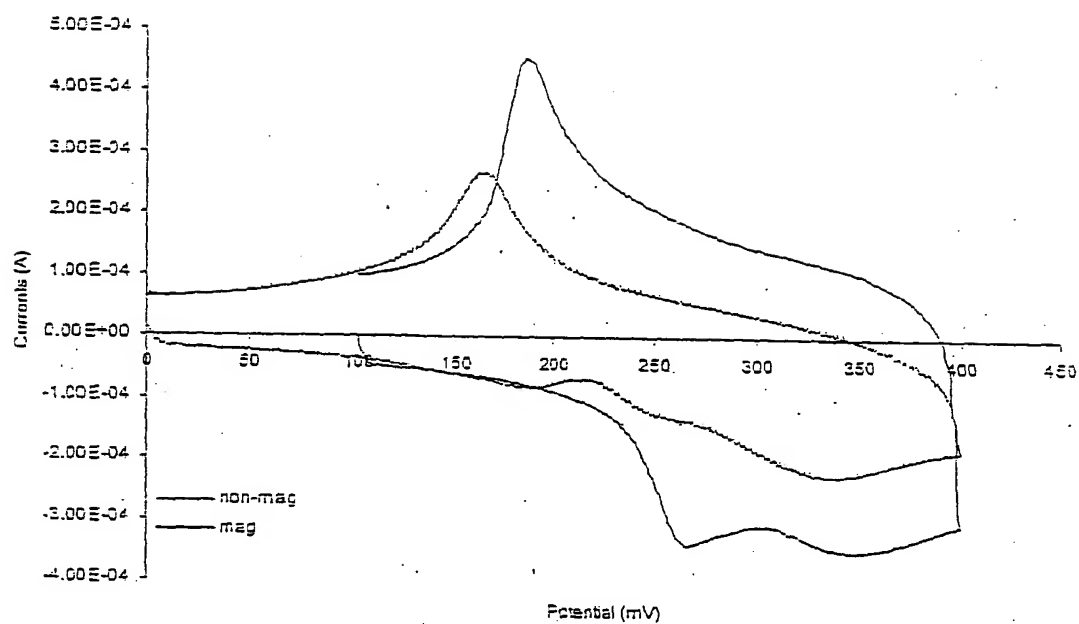


Figure 17. Cyclic Voltammograms for Non-magnetized and Magnetized  $\text{Ni(OH)}_2 + 5\% \text{SmCo}$  Mixture Electrode ( $\nu = 200 \text{ mV/sec}$ ).



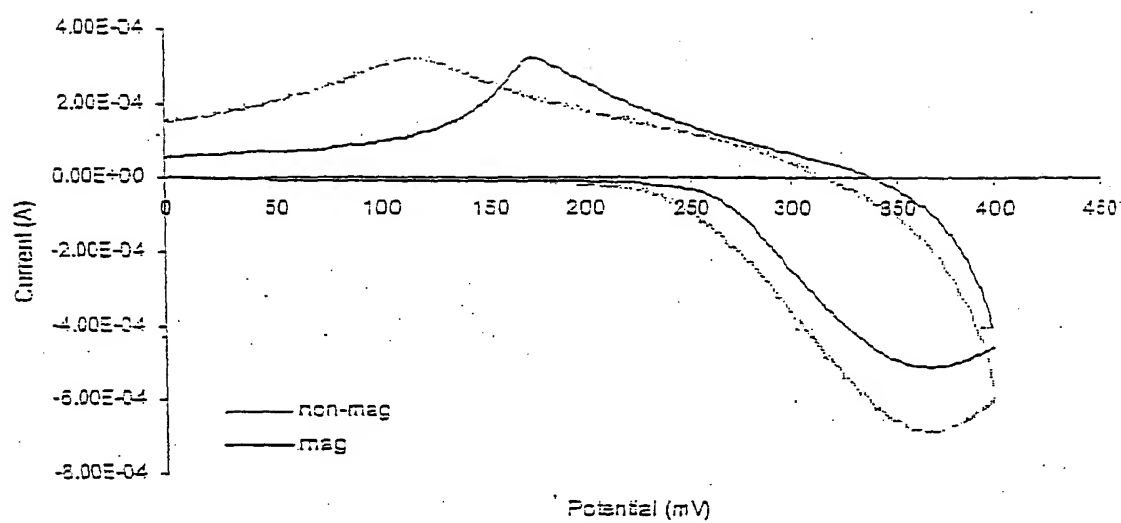


Figure 18. Cyclic Voltammograms for Magnetized and Non-magnetized Pure Nickel Hydroxide Electrodes at  $T = -15^{\circ}\text{C}$  ( $\nu = 200 \text{ mV/sec}$ ).

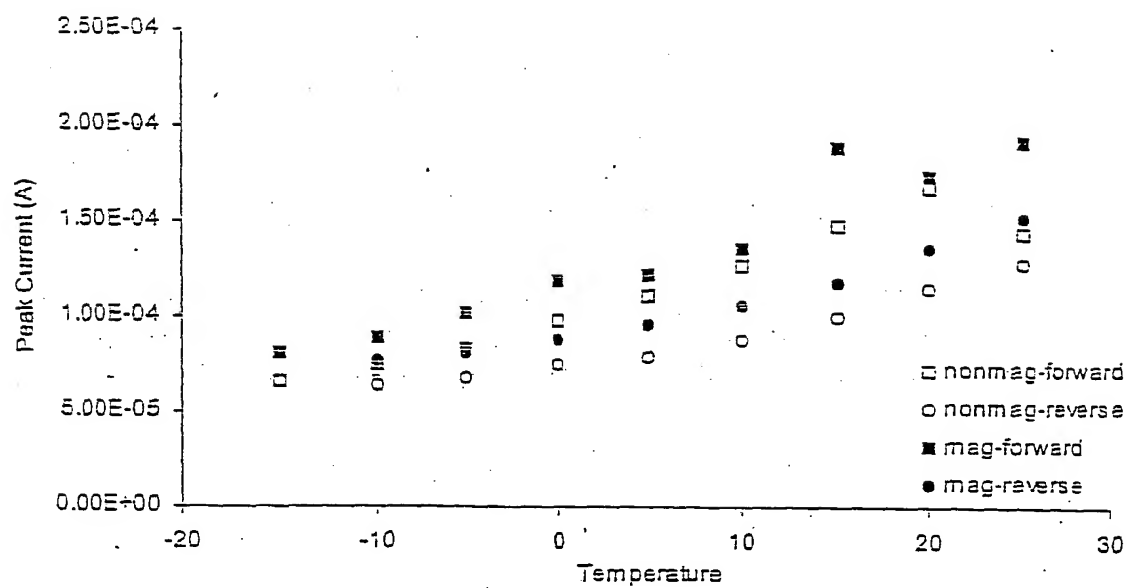


Figure 19 Cathodic Currents for Magnetized and Non-magnetized Pure Nickel Hydroxide Electrode at Different Testing Temperature (Forward (25°C to -15°C); Reverse (-15°C to 25°C);  $\nu = 200 \text{ mV/sec}$ ).

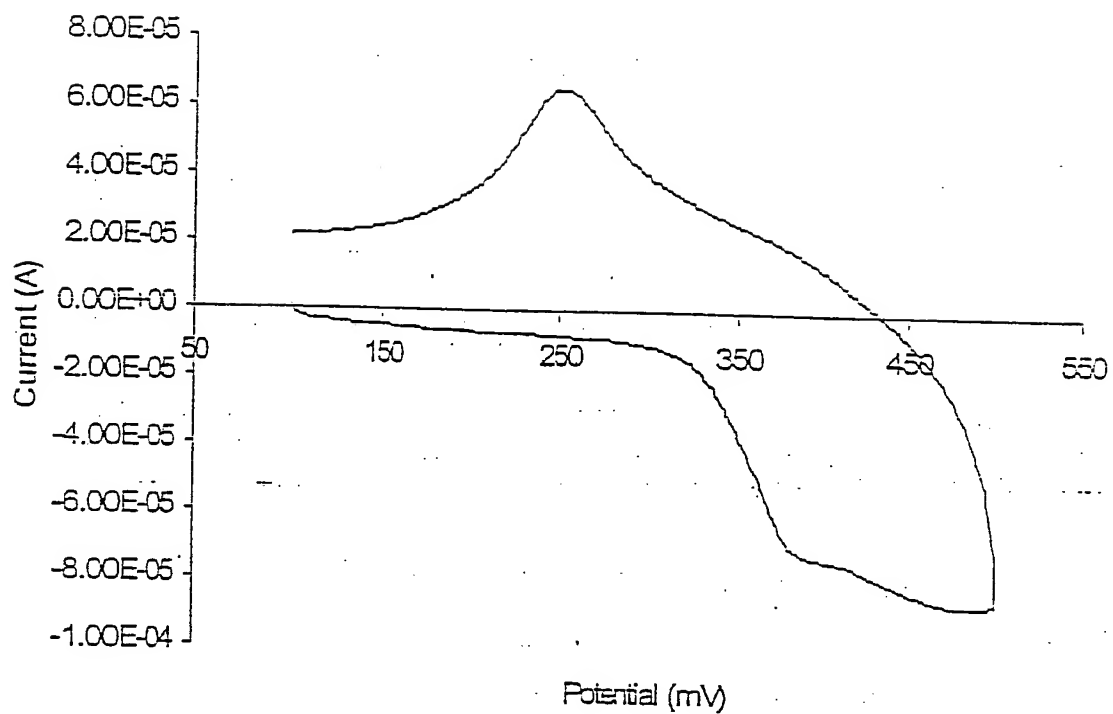
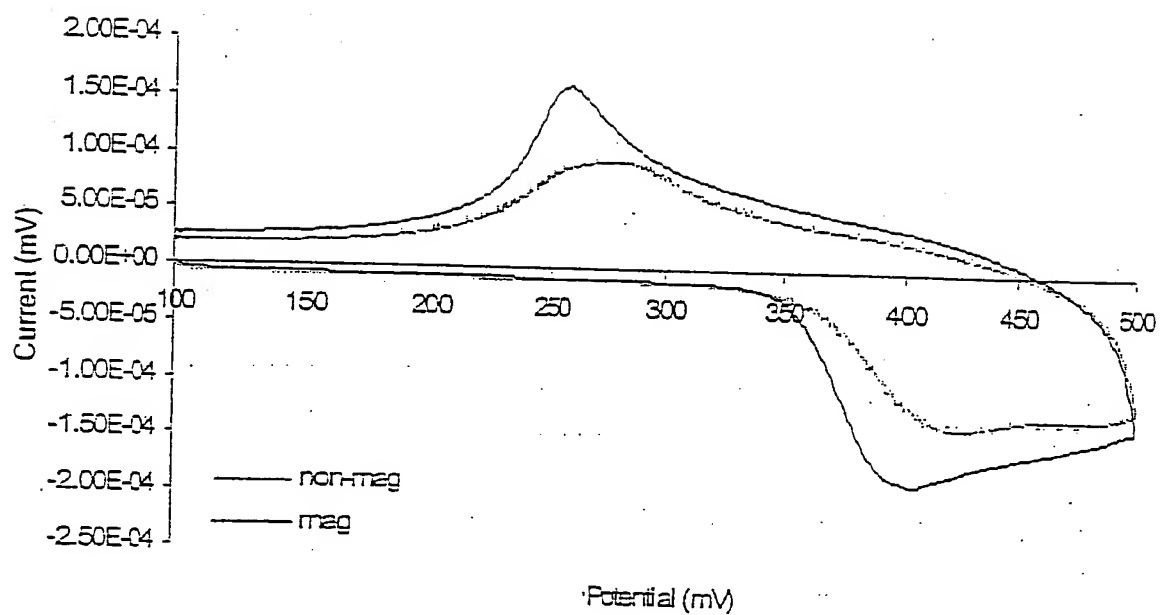
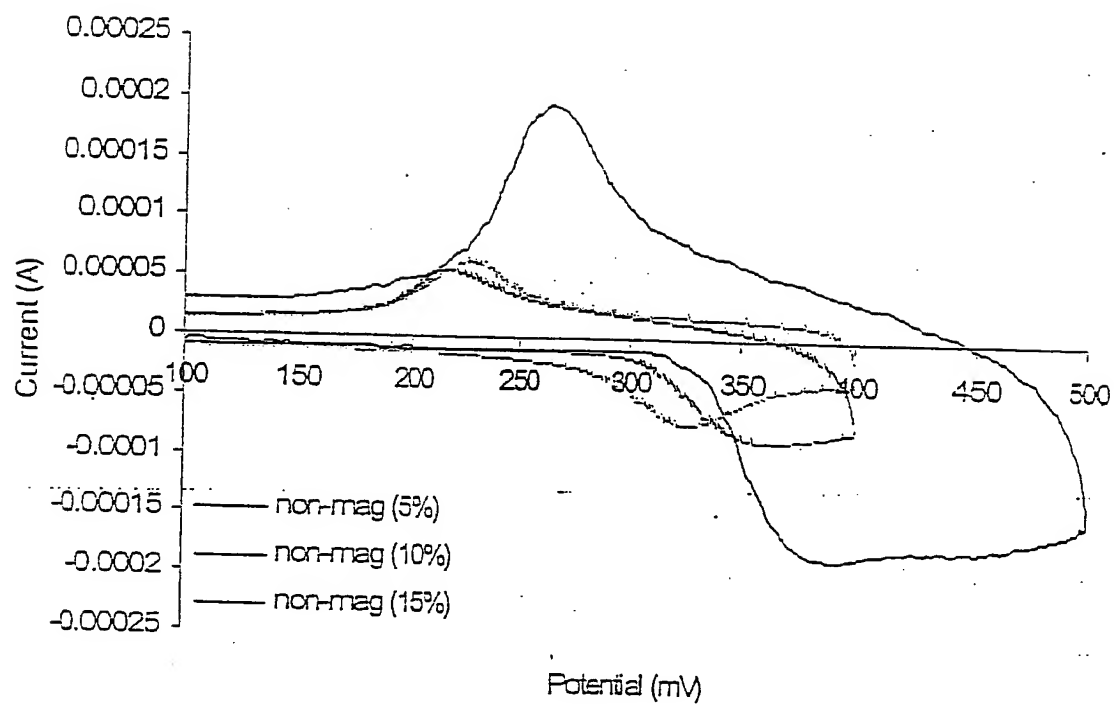


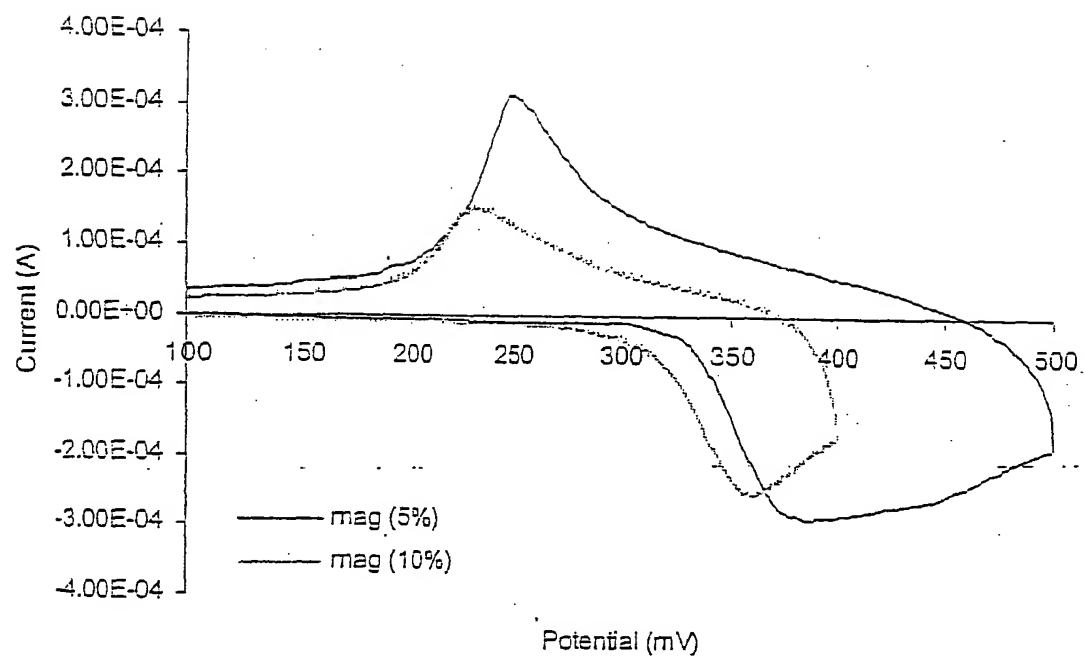
Figure 20. Cyclic Voltammogram for Non-magnetized  $\text{Ni}(\text{OH})_2 + \text{Glass Beads (5\%)}$  Mixture  
Electrode at  $T = -15^\circ\text{C}$  ( $v = 200 \text{ mV/sec}$ ).



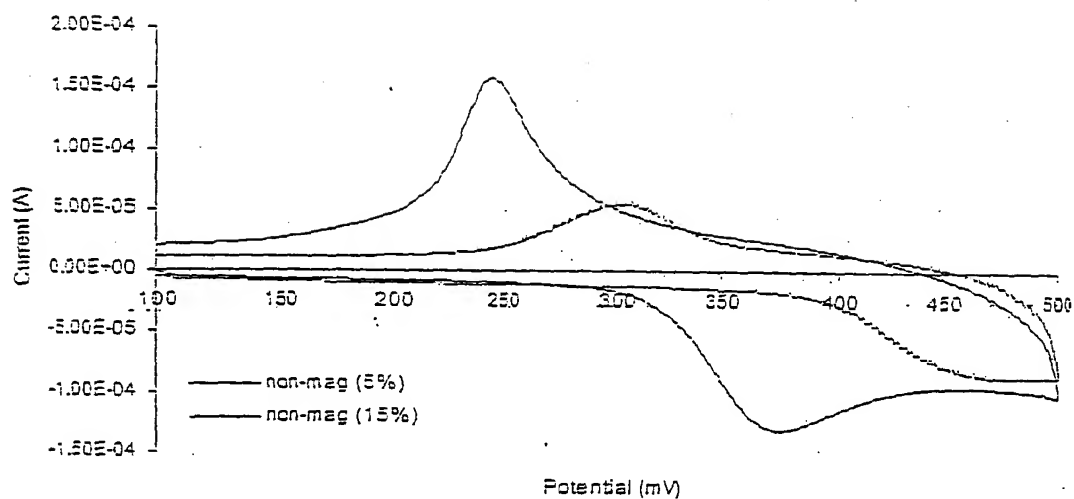
21  
 Figure 21. Cyclic Voltammograms for Magnetized and Non-magnetized  $\text{Ni(OH)}_2 + \text{Co(15\%)}$  Mixture Electrode at  $T = -15^\circ\text{C}$  ( $v = 200 \text{ mV/sec}$ ).



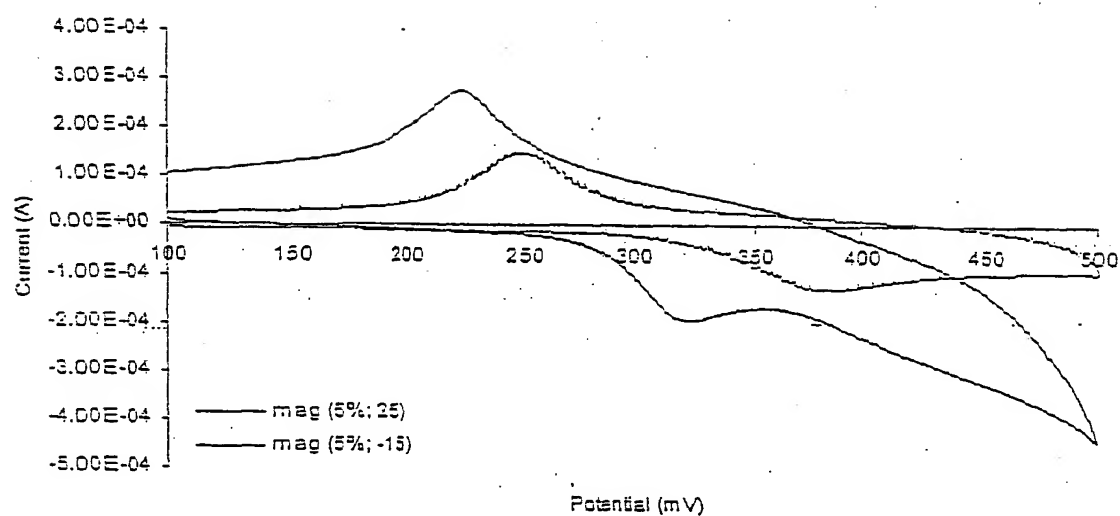
22  
Figure 22. Cyclic Voltammograms for Non-magnetized Ni(OH)<sub>2</sub> with 5, 10, and 15 wt.% Fe<sub>3</sub>O<sub>4</sub> Mixture Electrode at T = -15°C (v = 200 mV/sec).



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 Figure 33. Cyclic Voltammograms for Magnetized  $\text{Ni}(\text{OH})_2$  with 5 and 10 wt.%  $\text{Fe}_3\text{O}_4$  Mixture Electrode at  $T = -15^\circ\text{C}$  ( $v = 200 \text{ mV/sec}$ ).

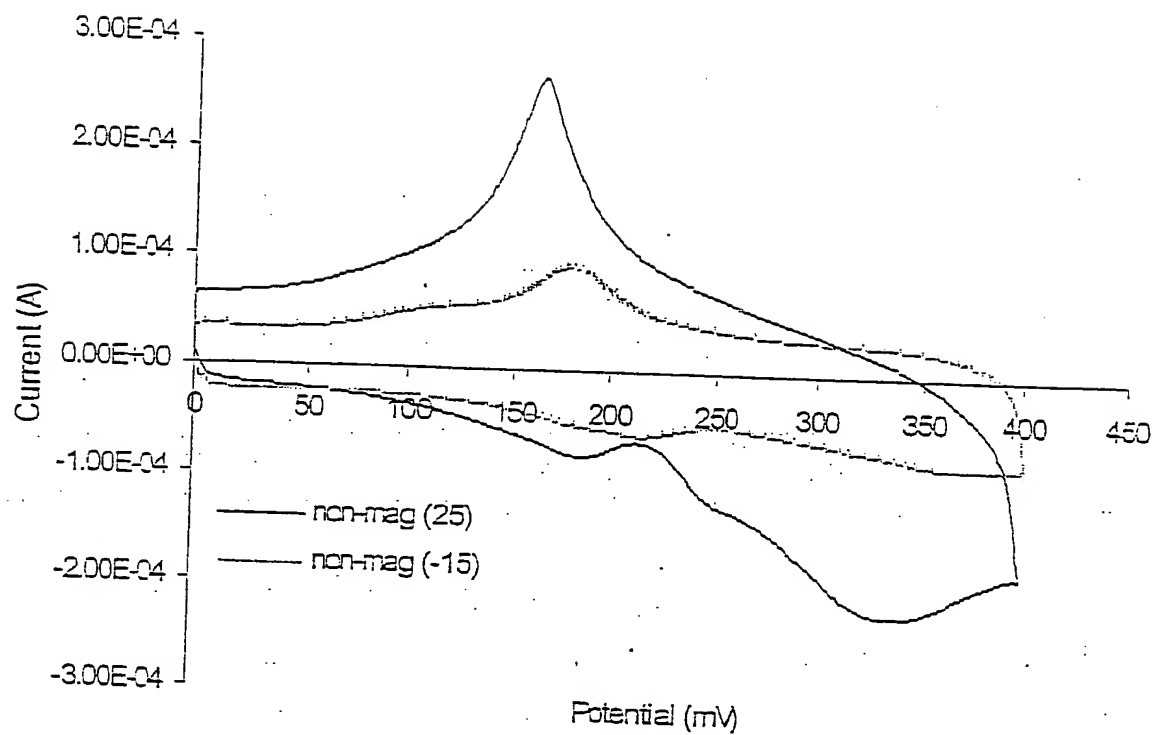


**B24**  
 Figure 24. Cyclic Voltammograms for Non-magnetized  $\text{Ni(OH)}_2$  with 5% and 15 wt.% NdFeB Mixture Electrode at  $T = -15^\circ\text{C}$  ( $v = 200 \text{ mV/sec}$ ).

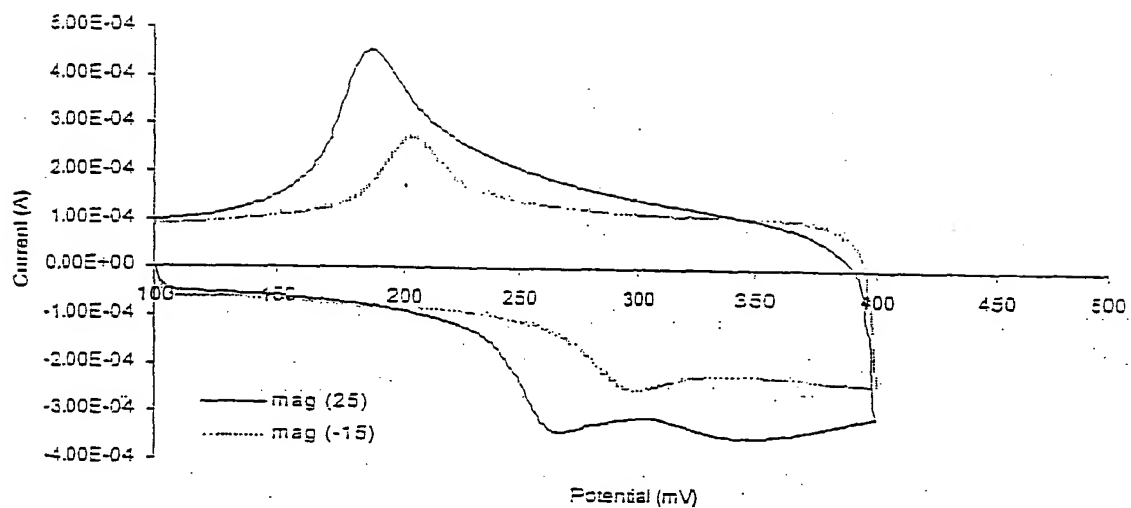


25  
Figure 25. Cyclic Voltammograms for Magnitized  $\text{Ni}(\text{OH})_2$  with 5% NdFeB Mixture Electrode at  $T = -15^\circ\text{C}$  ( $v = 200 \text{ mV/sec}$ ).





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 Figure 26. Cyclic Voltammograms for Non-magnetized  $\text{Ni}(\text{OH})_2$  with 5% SmCo Mixture Electrode at  $T = -15^\circ\text{C}$  ( $v = 200 \text{ mV/sec}$ ).



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 Figure 27. Cyclic Voltammograms for Magnetized  $\text{Ni}(\text{OH})_2$  with 5% SmCo Mixture Electrode at  $T = -15^\circ\text{C}$  ( $v = 200 \text{ mV/sec}$ ).